

This listing of claims replaces all prior versions, and listings of claims in the instant application:

Listing of Claims:

1. (Currently Amended) A method for remote software code update, comprising:

receiving an update command for a first program resident in a first code space comprising at least one memory segment wherein said first code space is read-only;

transferring, automatically, program control to a second program executing in a second code space comprising one or more memory segments;

selecting one memory segment of said at least one memory segment in said first code space;

mapping said selected memory segment to data space wherein said mapping changes said selected memory segment from read-only to read-write; and

writing said selected memory segment.

2. (Currently Amended) The method of claim 1, further comprising repeating said selecting, said mapping and said writing until each of said at least one memory segment that comprises at least part of said first program have been written.

3. (Currently Amended) The method of claim 1, further comprising erasing said selected memory segment after said mapping and before said writing.

4. (Original) The method of claim 1 wherein said first program and said second program are written for execution on an embedded device.

5. (Original) The method of claim 4, further comprising:  
resetting said embedded device;  
determining whether said first code space is valid;  
transferring program control to said first code space  
when said first code space is valid; and  
continuing execution from said second code space when  
said first code space is invalid.
6. (Original) The method of claim 1 wherein  
said first program comprises a main program; and  
said second program comprises a boot program.
7. (Original) The method of claim 6 wherein said first  
code space is larger than said second code space.
8. (Original) The method of claim 7 wherein said first  
program is larger than said second code space.
9. (Original) The method of claim 1 wherein said first  
code space is larger than said second code space.
10. (Original) The method of claim 9 wherein said first  
program is larger than said second code space.
11. (Currently Amended) A program storage device  
readable by a machine, embodying a program of instructions  
executable by the machine to perform a method for remote  
software code update, the method comprising:  
receiving an update command for a first program  
resident in a first code space comprising at least one  
memory segment wherein said first code space is read-only;  
transferring, automatically, program control to a  
second program executing in a second code space comprising  
one or more memory segments;

selecting one memory segment of said at least one memory segment in said first code space;

mapping said selected memory segment to data space wherein said mapping changes said selected memory segment from read-only to read-write; and

writing said selected memory segment.

12. (Currently Amended) The program storage device of claim 11 wherein said method further comprises repeating said selecting, said mapping and said writing until each of said at least one memory segment that comprises at least part of said first program have been written.

13. (Currently Amended) The program storage device of claim 11, wherein said method further comprises erasing said selected memory segment after said mapping and before said writing.

14. (Original) The program storage device of claim 11 wherein said first program and said second program are written for execution on an embedded device.

15. (Original) The program storage device of claim 11 wherein

said first program comprises a main program; and  
said second program comprises a boot program.

16. (Original) The program storage device of claim 11 wherein said first code space is larger than said second code space.

17. (Currently Amended) An apparatus for remote software code update, the apparatus comprising:

means for receiving an update command for a first program resident in a first code space comprising at least one memory segment wherein said first code space is read-only;

means for transferring, automatically, program control to a second program executing in a second code space comprising one or more memory segments;

means for selecting one memory segment of said at least one memory segment in said first code space;

means for mapping said selected memory segment to data space wherein said mapping changes said selected memory segment from read-only to read-write; and  
writing said selected memory segment.

18. (Currently Amended) The apparatus of claim 17, further comprising means for repeating said means for selecting, said means for mapping and said means for writing until each of said at least one memory segment that comprises at least part of said first program have been written.

19. (Currently Amended) The apparatus of claim 17, further comprising means for erasing said selected memory segment after said mapping and before said writing.

20. (Original) The apparatus of claim 17 wherein said first program and said second program are written for execution on an embedded device.

21. (Original) The apparatus of claim 17 wherein said first program comprises a main program; and said second program comprises a boot program.

22. (Original) The apparatus of claim 17 wherein said first code space is larger than said second code space.

23. (Currently Amended) An apparatus for remote software code update, comprising:

a memory comprising a first code space, a first data space, a second code space and a second data space, each of said spaces comprising at least one memory segment, wherein said first code space and said second code space are read-only;

a processor configured to execute instructions in a first program resident in said first code space until an update command is received, said processor further configured to automatically transfer program control to a second program executing in said second code space when said update command is received, said processor further configured to select one of said at least one memory segment in said first code space, map said selected memory segment to data space, wherein said mapping changes said selected memory segment from read-only to read-write, and write said selected memory segment.

24. (Currently Amended) The apparatus of claim 23 wherein said processor is further configured to repeat said selecting, said mapping and said writing until each of said at least one memory segment that comprises at least part of said first program have been written.

25. (Currently Amended) The apparatus of claim 23 wherein said processor is further configured to erase said selected memory segment after said mapping and before said writing.

26. (Original) The apparatus of claim 23 wherein said device comprises an embedded device.

27. (Original) The apparatus of claim 23 wherein said first program comprises a main program; and said second program comprises a boot program.

28. (Original) The apparatus of claim 23 wherein said first code space is larger than said second code space.

29. (Currently Amended) A method for remote software code update, comprising:

transferring, automatically, program control to a first program executing in a first code space comprising one or more memory segments, said transferring responsive to an update command received from a remote device, said update command comprising a request to update a second program resident in a second code space comprising at least one memory segment, wherein said first and second code spaces are read-only;

selecting one of said at least one memory segment in said second code space;

mapping said selected memory segment to data space wherein said mapping changes said selected memory segment from read-only to read-write; and

writing said selected memory segment.